

REMARKS

The application contains claims 1-47. Claims 15 and 25 have been amended. No new matter has been introduced. Reconsideration is respectfully requested.

Applicant thanks Examiners Nguyen and Vuong for the courtesy of a personal interview with Applicant's representative, Sanford T. Colb (Reg. No. 26,856), held in the USPTO on November 28, 2006. At the interview, Mr. Colb argued the patentability of claim 1 in the present patent application over the cited art (Hrastar and Melpignano, cited below), and proposed a draft amendment to claim 15. The Examiner agreed that the claims presented by Mr. Colb at the interview distinguish the present invention over the prior art of record. Applicant has amended independent claim 15 as proposed at the interview.

Claims 1-4, 12-17, 25-28, 32-34 and 42-44 were rejected under 35 U.S.C. 103(a) over Hrastar et al. (US 2004/0157624) in view of Melpignano et al. (US 2003/0003912). Applicant respectfully traverses the rejection of claims 1-4, 12-14, 32-34 and 42-44. Applicant has amended independent claim 15 in order to clarify the distinction of the claimed invention over the cited references. Claim 25 has been amended for proper antecedence in view of the amendment to claim 15.

Hrastar describes a method for identifying wireless nodes and mapping their locations, by transmitting queries to and receiving signals from the wireless nodes (abstract). These methods may be used in assessing security risks and identifying threats in wireless network environments (paragraph 0003). One such threat is theft of an authorized user's identity, and specifically of Service Set Identifiers (SSIDs), which act as "crude passwords" (paragraph 0021).

Melpignano describes radio communication arrangements in which a master unit holds information about the topology of a shared resource network. During handoff of a slave unit from one master unit to another, the first master unit activates a paging procedure by the second master unit (abstract). Melpignano describes embodiments in which the master units are Bluetooth access points (AP), while the slave units are Bluetooth mobile terminals (MT) (paragraph 0059).

Claim 1 recites a method in which a plurality of access points in a WLAN communicate over the air with a mobile station using a common BSSID. The Examiner maintained that Hrastar teaches this feature in paragraph 0021. Although Hrastar mentions the generic term SSID, however, he makes no mention of the more specific BSSID, which is recited in claim 1. Furthermore, Hrastar makes no suggestion that the same BSSID (or even the same SSID) might be used in common by a plurality of access points.

The BSSID is defined in the IEEE 802.11 standard as follows:

7.1.3.3.3 BSSID field

The BSSID field is a 48-bit field of the same format as an IEEE 802 MAC address. This field uniquely identifies each BSS. The value of this field, in an infrastructure BSS, is the MAC address currently in use by the STA in the AP of the BSS.

The value of this field in an IBSS is a locally administered IEEE MAC address formed from a 46-bit random number generated according to the procedure defined in 11.1.3. The individual/group bit of the address is set to 0. The universal/local bit of the address is set to 1. This mechanism is used to provide a high probability of selecting a unique BSSID.

It follows from this definition that in a conventional WLAN, each access point (AP) has its own, unique BSSID and that duplication of the BSSID among access points is to be avoided. The present patent application reinforces this definition (paragraph 0008 in the published version of the application, US 2004/0063455). It points out that a conventional WLAN would not operate properly if different access points shared the same BSSID, since multiple access points would all acknowledge the same uplink message from a mobile station (paragraphs 0042-0043). The invention recited in claim 1, however, enables BSSID sharing by managing the access points in a novel way: “sending and receiving messages over a communication medium linking the access points in order to select one of the access points to respond to the uplink signal.”

Thus, since the cited references neither teach nor suggest BSSID sharing, Applicant respectfully submits that claim 1 is patentable. In view of the patentability of claim 1, dependent claims 2-4 and 12-14 are also believed to be patentable.

Independent claim 32 recites apparatus for mobile communications in which a plurality of access points communicate over the air on a common frequency channel using a common BSSID. A manager node processes messages transmitted over a communication medium linking the access points in order to select one of the access points to respond to uplink signals from a mobile station.

Thus, claim 32, like claim 1, recites the use of a common BSSID by multiple access points in a WLAN. As this feature is neither taught nor suggested by the cited art, Applicant respectfully submits that claim 32 is also patentable, as are claims 33, 34 and 42-44, which depend from claim 32.

Independent claim 15 recites a method in which a manager node selects one of a number of access points, which communicate on a common frequency channel, to respond to an uplink message from a mobile station. Applicant has amended the claim in order to clarify that two or more of the access points may receive a given uplink signal, and the manager node then selects one of these access points to respond. This added limitation is supported clearly in the specification of the present patent application (for example, in paragraph 0042).

Neither Hrastar nor Melpignano teaches or suggests this mode of operation. In Melpignano, each mobile terminal (MT) communicates at any given time with a single access point (AP). When a handover to another AP is needed (typically due to poor link quality), the current AP communicates with its neighboring APs and instructs them to establish a connection with the MT (paragraphs 0092-0098, cited by the Examiner). Only one AP receives uplink signals from the MT at any given time. This point is reinforced by the message flow diagrams in Melpignano's Figs. 2-5.

The Examiner acknowledged in the Official Action that Hrastar fails to teach conveying and processing messages between access points and a manager node as recited in claim 15. Hrastar also does not teach or suggest receiving an uplink signal at two or more access points and selecting one of these access points to respond.

Therefore, independent claim 15, as amended, is patentable over the cited art. In view of the patentability of claim 15, dependent claims 16, 17 and 25-28 are also believed to be patentable.

Dependent claims 5-10, 18-23, 29-31, 35-40 and 45-47 were rejected under 35 U.S.C. 103(a) over Hrastar in view of Melpignano, and further in view of Honkasalo et al. (US 2003/0210674), while claims 11, 24 and 41 were rejected over these references together with Chari et al. (U.S. Patent 7,016,328). Applicant respectfully traverses these rejections. In view of the patentability of independent claims 1, 15 and 32, dependent claims 5-11, 18-24, 29-31, 35-41 and 45-47 are also believed to be patentable.

Furthermore, notwithstanding the patentability of the independent claims in this application, Applicant believes that the dependent claims recite independently-patentable subject matter. In the interest of brevity, however, Applicant will refrain from arguing the independent patentability of the dependent claims at present.

Applicant hereby requests reconsideration and reexamination thereof.

With the above amendments and remarks, this application is considered ready for allowance and Applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to call the undersigned at the below-listed number.

Respectfully submitted,
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Dated: December 18, 2006

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